

CLAIMS

1. A process for preparing optically enriched (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol comprising:

subjecting a mixture of (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol and (-)-(2R, 3R)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol to continuous chromatography to resolve (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol from the mixture.
2. The process according to claim 1 wherein said mixture is a racemic mixture.
3. The process according to claim 1 or claim 2, wherein the mixture is passed through an MCC system.
4. The process according to claim 3, wherein the mixture is passed through a VARICOL system.
5. The process according to any one of claims 1 to 4, wherein said continuous chromatography comprises contacting an eluent comprising at least one solvent, with a chiral stationary phase, wherein the solvent is selected from the group consisting of C₅-C₇ alkane, C₁-C₃ alkanol, methyl tert-butyl ether, ethyl acetate, acetone and acetonitrile.
6. The process according to claim 5, wherein said eluent is acetonitrile.
7. The process according to claim 5, wherein said eluent is a mixture of acetonitrile and 2-propanol.
8. The process according to claim 7, wherein said acetonitrile to 2-propanol ratio is between 93/7 % v/v to 99/1 % v/v.
9. The process according to claim 8, wherein said acetonitrile to 2-propanol ratio is between 95/5 % v/v to 97/3 % v/v.
10. The process according to claim 5, wherein said chiral stationary phase comprises amylose tris-(3,5-dimethylphenylcarbamate).
11. The process according to any one of claims 1 to 10, which further comprises crystallizing the (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol obtained from the mixture.
12. The process according to any one of claims 1 to 10, wherein said (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol is obtained in a raffinate stream and (-)-(2R, 3R)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol is obtained in an extract stream.

13. The process according to any one of claims 1 to 12, which further comprises racemizing the (-)-(2R, 3R)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol to form a racemic mixture of (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol and (-)-(2R, 3R)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol and subjecting the thus formed racemate to continuous chromatography.
14. The process according to claim 13 wherein the racemate is recycled into a feed stream.
15. The process according to claim 13 or 14 wherein the racemization is effected in methanol:
16. The process according to any one of claims 1 to 15, wherein the (+)-(2S, 3S)-2-(3-chlorophenyl)-3,5,5-trimethyl-2-morpholinol is recovered in an amount of at least 90%.